

REMARKS

Claims 15-29 are present in this application. By this Amendment, claims 15, 16, 27, and 28 are amended, and claim 29 is added. No new matter has been added. Claims 1-14 were previously cancelled. Claims 15 and 29 are the independent claims.

Rejections under 35 U.S.C. § 101, statutory subject matter

Claims 27 and 28 are rejected under 35 U.S.C. § 101 as not being proper process claims for failing to set forth any steps involved with the process. Applicants submit that this rejection has been overcome by the foregoing amendments.

Specifically, claims 27 and 28 each now recite a proper process step (e.g., "initiating or accelerating said chemical reactions").

Thus, Applicants respectfully request that this rejection of the claims be withdrawn.

Rejections under 35 U.S.C. § 112, second paragraph (indefiniteness)

Claims 27 and 28 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite with respect to the phrase "in particular," and with respect to failing to set forth any steps involved with the process. Applicants submit that this rejection has been overcome by the foregoing amendments.

Specifically, claims 27 and 28 have been amended to delete the phrase, "in particular," and have been amended to recite a proper process step ("initiating or accelerating said chemical reactions").

Since the claimed invention is more definitely claimed, it is respectfully requested that this rejection of the claims be withdrawn.

Rejections under 35 U.S.C. § 102

Claims 15-21 and 23-28 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Commarmot et al. (US Patent No. 4,693,867). Applicants respectfully traverse this rejection for the reasons detailed below.

Independent claim 15 recites, in part:

a cap having a through hole;
a sealing diaphragm;

As an illustrative and non-limiting example of a sealing diaphragm, the specification, at lines 32-36 of page 6, states:

The **diaphragm 30 is an elastic element**, preferably having self-sealing properties in order to allow penetration by a dispensing means, such as a needle. Suitable materials for a sealing diaphragm are well known within the art, and need not be further commented here. Naturally, the diaphragm 30 **may have a thickness of approximately one or a few millimeters.**

Further, it is noted that the "cap having a through hole" feature of claim 15 facilitates inserting a hollow needle (or other puncturing object) through the through hole of the cap, and punctures the diaphragm with the hollow needle to access the contents of the vessel beneath the diaphragm.

The Office Action, at pages 3 and 4, asserts that Commarmot discloses all of the features of independent claim 15. Specifically, the Office Action asserts that the sealing diaphragm of claim 15 is disclosed by a horizontal line at the top of the reaction vessel 87 of FIG. 14 of Commarmot. Applicants respectfully disagree.

The figure on page 4 of the Office Action has been annotated by the Examiner, and asserts that a horizontal line at the top of the neck of the container 14 (or the bottom of the cover 90) is a diaphragm. However, this horizontal line is not explicitly defined in Commarmot. Commarmot, at lines 42-44 of column 8, merely states that, "**the cover 90 in abutment with the upper edge of the ring 88** as illustrated in solid lines in FIG. 14." **This undefined line appears to be either the top of the neck of a container 14, or the bottom of the cover 90.**

Additionally, element 14a of FIG. 14 is described at Commarmot, column 8, line 26, as illustrating the upper edge of the neck 14 of a container. Commarmot does not teach or suggest that the upper end of the reaction vessel is sealed by means of a diaphragm. To the contrary, Commarmot, at column 8, lines 40-50, merely provides a cover 90 in abutment on the upper edge of ring 88 and comprising a tube 95 in permanent relation with a supple pipe leading to a pumping and suction unit. The pumping and suction unit is started up in synchronized manner for the time necessary for ensuring removal of the fumes and vapors released by the reaction, (Commarmot, column 10, lines 35-42).

Therefore, Applicants submit that Commarmot does not disclose a diaphragm sealing the upper end of the reaction vessel. There is not any teaching or suggestion in Commarmot of a sealing diaphragm.

Additionally, there can not be any diaphragm in the apparatus according to Commarmot, because such a diaphragm would keep such fumes/vapors locked inside the reaction vessel, and the suction unit would not be able to remove the fumes/vapors through the cover 90 as required. Thus, Applicants submit that Commarmot **teaches away** from the sealing diaphragm of independent claim 15.

Therefore, Applicants submit that the micro vial assembly according to claim 15 is not anticipated by Commarmot.

Applicants submit that claims 16-21, and 23-28, dependent on independent claim 15, are patentable for the reasons stated above with respect to claim 15 as well as for their own merits. Accordingly, Applicants respectfully request that the rejection be reconsidered and withdrawn.

Rejections under 35 U.S.C. § 103

Claim 22 stands rejected under 35 U.S.C. § 103 as being unpatentable over Commarmot in view of Bennett et al. (U.S. Patent 5,520,886).

As discussed above, Applicants submit that independent claim 15 is patentable over Commarmot. Further, Applicants submit that Bennett does not remedy the deficiencies of Commarmot.

For example, FIG. 1 of Bennett merely discloses a container 13 with a skirt 31 which reduces dangerous explosions by allowing a more gradual failure of the container 13, as described at column 3, lines 43-47, of Bennet.

Thus, Applicants submit that dependent claim 22 depends from independent claim 15, and is allowable for the reasons stated above with respect to claim 15 as well as for their own merits. Accordingly, Applicants respectfully request that the rejection be reconsidered and withdrawn.

New Claim 29

Applicants have added claim 29 to provide further, different claim protection. For instance, new independent claim 29 recites, in part: "**a sealing, elastic diaphragm.**"

In the interests of compact prosecution, Applicants submit that independent claim 29 is allowable over the cited art for, at a minimum, the same reasons as independent claim 15.

Cited Art Not Relied Upon (Manganini)

The Office Action, at page 9, asserts that Manganini (U.S. Patent 6,803,237) discloses a “sealing diaphragm.” Manganini is not relied upon for any rejections, but is merely considered pertinent.

In the interests of compact prosecution, Applicants will distinguish the “sealing diaphragm” of independent claim 15 over Manganini.

Specifically, the Office Action asserts that o-ring 120 and top cover 115 in FIG. 1B of Manganini disclose the “sealing diaphragm” of claim 15. It is not clear whether the Office Action intends that the o-ring, or the top cover, or the combination of the o-ring with the top cover allegedly disclose the “sealing diaphragm” of claim 15. Applicants respectfully request clarification.

Although, the term “diaphragm” is not explicitly defined in the present application, but a person of ordinary skill in the art would interpret the term to mean “**a dividing membrane or thin partition**” (Merriam-Webster’s Collegiate Dictionary, Tenth Edition). Further, as discussed above, as an illustrative and non-limiting example of a sealing diaphragm, the specification, at lines 32-36 of page 6, states: “The **diaphragm 30 is an elastic element.**”

In contrast to the sealing diaphragm of claim 15, top cover 115 of Manganini **is inherently rigid**, because the top cover 115 requires an o-ring 120 in order to mate the edge of the top cover against the container wall 125. Additionally, Manganini, at column 4, lines 59-63, states that top cover 115 is made of a polytetrafluorethylene material, sold under the trademark Teflon®, which is a material that is hard and not elastic.

Further, top cover 115 of Manganini has a **vertical through hole**, and therefore does not seal. Top cover 115 even has a threaded connection to top valve 105.

Therefore, Applicants submit that Manganini **teaches away** from the “sealing diaphragm” of claim 1.

CONCLUSION

Accordingly, in view of the above amendments and remarks, an early indication of the allowability of each of claims 15-29 in connection with the present application is earnestly solicited.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John A. Castellano at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By

John A. Castellano, Reg. No.: 35,094

P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

JAC/DJC/EGO/dmc

EJ,